

## CLIMATOLOGICAL DATA FOR SEPTEMBER, 1911.

## DISTRICT NO. 3, OHIO VALLEY.

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## GENERAL SUMMARY.

September, 1911, was an unusually warm month over the entire Ohio Valley. The unusual warmth was especially pronounced over the section south of the Ohio River, where the temperature averaged higher, except in Kentucky, than for any September of record. In Kentucky it was the warmest September, with one exception, in the past 23 years, and also unusually wet. Over the States north of the Ohio River and over western Pennsylvania, western Maryland, and most of West Virginia the month was not only unusually warm, but also extraordinarily wet. In fact, it was the wettest September in most of these States of which there is any record. Excessive rains occurred over large portions of this extensive area, the heaviest being in the Wabash Basin of Illinois and Indiana, the Mahoning and Muskingum Valleys in Ohio, and in the lower basin of the Monongahela, Beaver, and Allegheny Rivers in western Pennsylvania. In Illinois the total rainfall was not only greater than for any previous September, but is the greatest amount occurring in that State in any single month for which there is authentic record.

A great deal of damage was occasioned by these unseasonable and extraordinary rainfalls. Still, on the other hand, they were not without benefit, for, particularly in the Wabash Basin, where they were greatest, they effectively broke the serious drought that had prevailed over that section during the preceding 8 to 10 weeks.

It is rather unusual that both temperature and rainfall for September should be in excess. Usually abnormally warm Septembers are dry and the unseasonably wet Septembers cool. Records in this district during the past quarter of a century show but few exceptions to this general rule. As a whole the month was favorable in all parts of the district, the rains and warm weather greatly benefiting pastures and late crops, while the superabundance of rain replenished streams and revived water sources, which had become much depleted.

The conditions as to temperature and rainfall, which obtained in the various portions of the district during September, 1911, are shown in the following table:

Portions of States lying within district No. 3.	Mean temperature in degrees Fahrenheit.	Departure from normal.	Mean precipitation in inches.	Departure from normal.	reatest 24-hour precipitation in inches.
New York.....	61.3	+2.8	5.16	.....	1.40
Pennsylvania.....	65.8	+1.8	7.13	+4.20	4.09
Maryland.....	63.7	+2.7	5.87	+3.66	2.00
West Virginia.....	69.1	+3.4	4.77	+1.95	3.78
Ohio.....	68.2	+2.1	5.29	+2.57	4.12
Indiana.....	70.6	+3.3	6.34	+3.66	5.45
Illinois.....	71.2	+3.3	8.44	+5.04	3.71
Kentucky.....	74.3	+3.8	3.71	+1.13	3.32
Tennessee.....	76.4	+5.9	2.52	-0.56	2.50
Alabama.....	78.4	+5.2	1.86	-1.23	1.75
Georgia.....	74.2	+5.0	3.10	-1.20	1.36
North Carolina.....	70.9	+6.3	3.63	+0.19	5.50
Virginia.....	68.6	+4.2	2.77	-0.46	2.10

The temperature averaged above normal for the month of September at every station in the district except two or three, the departures ranging between +2° and +8°. The greater excesses, as a rule, occurred over the southern half of the district, while the lesser were in the northeastern section. At many stations in Kentucky, Tennessee, North Carolina, and Virginia the temperature averaged the highest of any September of record. The average temperature of the State of Tennessee was nearly 2° higher than that of any previous September and nearly 13° higher than the coolest September of record. In several of the States in the southern portion of the district the September temperature averaged higher than for either of the two midsummer months preceding.

The abnormally high average temperature was the result rather of continuously high minimum temperatures, that is, warm nights rather than extremely high day temperatures. At none of the regular Weather Bureau stations located on or south of the Ohio River, other than those in Pennsylvania and West Virginia, did the temperature go below 50°. At Knoxville and Chattanooga, Tenn., the minimum temperature of the month was 63° and 64°, respectively. In fact, at a large number of the stations in the district the lowest temperature of this month was the highest monthly minimum temperature of record for September.

The mean daily temperature was above normal at quite a few of the stations in the southern portion of the district every day during the entire month. It was above normal at all stations in the district on at least 24 to 26 days out of the 30, the daily excesses ranging from +2° to +16°. The accentuated warm periods for the district as a whole were the 1st to 11th, 16th to 18th, and the 23d to 28th. During these periods maximum temperatures of from 85° to 95° were experienced more or less generally, while on a few of the days maxima of 96° to 98° were registered at some stations in most of the States. The highest temperature of the month was 103°, registered at Cedar Hill, Tenn., on the 28th, and the next highest, 100°, at Weston, W. Va., on the 7th, and at Cedar Hill, Tenn., on the 27th.

The cool periods, while three in number, were not coincident in the various parts of the district. They were the 13th to 14th, when the average daily temperature ranged from 2° to 13° below normal, and minimum temperatures ranged from 30° to 45° in the north central and northeastern parts of the district; the 20th to 22d, when average temperatures were slightly below normal over the northern and central portions of the district, but no low minimum temperatures occurred; and the 30th, when average temperatures were from 2° to 8° below normal, and minimum temperatures registered from 40° to 56° over the northern sections of the district. In Illinois and Indiana the lowest temperature of the month was reached

on the 30th, but in other sections of the district considerably lower temperatures were registered earlier in the month and mostly during the cool weather of the 13th and 14th. Frost occurred in New York, Pennsylvania, Maryland, West Virginia, and Ohio on the 13th and 14th, but there was little damage.

#### PRECIPITATION.

Unseasonably heavy rains for the season of the year occurred during the month over all the northern and a considerable portion of the central sections of the district. The total precipitation of the month was above normal at all stations in Illinois, Indiana, Ohio, western Pennsylvania, and western Maryland; at all stations except 3 or 4 in West Virginia, and at a majority of the stations in Kentucky. Over these areas the amounts at the various stations ranged between 4 and 15 inches. The heaviest rainfall occurred over the Wabash watershed in Illinois and Indiana, and eastward over southern Indiana into the lower watersheds of the Miami Rivers in southwestern Ohio. At many stations in this extensive area the monthly rainfall ranged between 7 and 15 inches, or from 5 to 12 inches above the usual amount for September. The section director at Springfield, Ill., says:

The month presented the most remarkable rainfall conditions ever recorded in Illinois during the month of September. The least amount was 3.79 inches at Carmi, while in a group of seven or more counties in the central part of the State the amounts exceeded 10 inches, culminating in a maximum of 14.6 inches at Sumner, Lawrence County. These amounts were 6 to 10 inches above the normal. The least precipitation occurred in the southern counties. In the above-mentioned region of heavy rainfall and over the remainder of the district to the northward, all September records for heavy rainfall were broken. At Olney, Paris, Robinson, and Urbana the rainfall exceeded that of any month of any year, and also at Palestine and Philo, with but one exception. The average rainfall for the State, 8.84 inches, is not only the record amount for September, but is the greatest State average ever recorded in any month of any year.

Farm crops have suffered greatly. At the close of the month all streams were at flood stage or out of their banks. The observer at Paris states that the rivers were higher than within at least 10 years. In the river bottoms much of the corn and cowpea crops are ruined, in some places being buried in the mud. In Richland County only about 10 per cent of the land is subject to overflow, but in the vicinity of Sumner, Lawrence County, the bottom land is the main corn territory. On the uplands the corn was blown down in many sections by some severe wind squalls that occurred during the month, as much as 50 per cent being down in some places. Corn that is lying on the ground is rotting or sprouting and all corn is damaged. In Lawrence County the corn has suffered 25 per cent to 30 per cent on the uplands. Broom corn, tomatoes, and other crops have suffered also. Plowing and planting of wheat have been much delayed. The floods caused damage to roadbeds and bridges. Mail service was discontinued on some rural routes out of Olney.

Excessive rainfalls, second in importance only to those occurring in the Wabash region and neighboring sections mentioned above, occurred over the watershed of the upper Ohio River and its headwater tributaries. Over this section, which includes western Pennsylvania, extreme eastern Ohio and northwestern West Virginia, the rainfall of the month amounted to from 5 to 10 inches.

In Kentucky the rainfall varied considerably, ranging in amount from 0.4 inch at Bowling Green in the southwestern part of the State to 7.5 inches at Scott in the north central portion. The rainfall in Tennessee and the northern portions of Georgia and Alabama averaged below normal for the month, although at some few stations in those areas amounts somewhat above normal were received. In southwestern Virginia rainfall was deficient over the headwaters of the Kanawha and in the Holston Valley, but a moderate excess occurred elsewhere.

Some heavy local rains occurred in extreme southwestern North Carolina, but over the rest of western North Carolina rainfall was slightly deficient.

During the first three or four days of the month there were only a few scattered and unimportant showers in the district, but on the 4th and 5th a general storm spread over the district, attended by rains which were heavy in many of the sections. Rain continued almost daily over the district from Tennessee northward and over the eastern sections from the 5th until the 22d. On several days during this period rains were very heavy and general in the northern and eastern portions of the district. Rains were again more or less heavy, but not so general, in the period 25th to 30th, inclusive. They were quite heavy, however, in portions of Indiana, Illinois, Ohio, and Pennsylvania on one or two days in that period.

The following heavy rainfalls are worthy of note: 3.71 inches in 24 hours at Smithfield, W. Va., on the 14th and 15th; 4.09 inches at Greenville, Pa., on the 15th; 4.12 inches at Wooster, Ohio, on the 15th; 4.09 inches at Marion and 4.41 inches at Logansport, Ind., on the 15th; and 5.45 inches at Columbus, Ind., on the 16th. Finally, at Brevard, N. C., 5.50 inches fell between 2 a. m. and 10 a. m. on the 23d.

#### MISCELLANEOUS.

Thunderstorms, attended by wind squalls, destructive lightning, and hail, were unusually frequent for the month of September in the Ohio Valley. Considerable damage was caused by these storms in various parts of the district, but particularly in the States north of the Ohio River and in Kentucky.

September 3: A boy was killed and 15 persons were stunned by lightning at Louisville, Ky., also two residences and the customhouse were struck by lightning, and many windows were broken and gardens damaged by hail in that city and vicinity.

September 14-16: In this period a great many destructive storms occurred over the central, northern, and eastern portions of the district. In Ohio there were at least a dozen houses and barns struck and burned by lightning and some 6 or 8 head of horses and cattle were killed. In Indiana several persons were injured by lightning, 3 school buildings were struck and injured, the post-office building at Terre Haute was slightly damaged, and a number of residences and 12 or 15 barns were reported to have been struck. Many of the barns were completely destroyed, with their contents. Also in the same State 8 horses, 3 mules, and 12 cows were killed. In Illinois high winds did considerable damage during one or more of these storms to orchards, growing corn, and buildings. On the 15th several head of horses and cattle were killed by lightning in that State, and during the night of the 12th-13th a terrific hailstorm passed over Ford County, Ill., doing great and widespread damage. It was one of the most destructive hailstorms that has visited Illinois in many years. On the afternoon of the 15th a severe local thunderstorm did considerable damage at the State fairgrounds at Louisville, Ky., while the fair was in session. Also, the day, being extremely warm and sultry, 28 persons were prostrated from heat on the fairgrounds. A church at La Grange, Ky., was struck by lightning and damaged. On the 13th high winds caused considerable local damage at Waynesville, N. C.

September 28: Two barns were struck by lightning; 12 horses, 2 cows, and a number of head of hogs were killed and several persons shocked; and a church struck and damaged in Indiana.

September 29: One man and three horses were killed, while another man and a child were badly injured by lightning that struck a barn near Owensboro, Ky.

*Rivers and streams.*—The heavy rains about the 9th caused rapid rises in the small streams in the upper watershed of the Ohio Valley, particularly in Pennsylvania and portions of West Virginia and Ohio, but, while the small streams became bank full, larger streams were not affected to any great extent and little or no damage was occasioned. The heavy rains of the 14th to 16th, however, caused rapid rises and bank-full stages in the larger as well as the smaller streams of the States of Pennsylvania, West Virginia, Ohio, and Indiana, and a great deal of damage occurred in those States from flooding of lowlands and the destruction of bridges and washing out of roads. In western Pennsylvania the property loss amounted to about half a million dollars. Most of this damage, however, was from smaller streams, very little of it being occasioned by the Ohio River itself. Flood warnings were issued by the Pittsburgh office and 500 campers, taking advantage of these warnings, moved off the islands along the Allegheny River, and the constructors of dams and bridges along the Ohio River were cautioned to protect their works, with the result that very little damage occurred other than the flooding of coffer-dams, etc. At Pittsburgh the Buffalo, Rochester & Pittsburgh Railroad suspended operations on account of high water on the north side for about 18 hours and the Pennsylvania Railroad for about 12 hours. In West Virginia the Little Kanawha and the upper Ohio Rivers were bank full and considerable damage was done in the river bottoms to corn and other crops growing in those fertile bottoms.

In Ohio many streams of the upper Ohio and Muskingum watersheds overflowed and did considerable damage to lowlands. Scores of bridges were destroyed on the Muskingum; corn and late crops were washed away and many sheep and cattle drowned. Traffic on electric and steam railroads and wagon roads was delayed considerably by washouts, and the destruction of bridges; also a number of manufacturing plants along the various streams were damaged or had to suspend operations temporarily.

In Illinois and Indiana the heavy rains in the middle of the month caused rapid rises in the streams, but there was very little damage done, the streams being at unusually low stages. The heavy rains of the 28th-29th, however, caused some overflowing of streams and some damage in the bottom lands of Indiana and southeastern Illinois.

The Cumberland River was at a low stage and nearly stationary during the month, navigation being closed,

except that permissible on account of dams. On the Tennessee River navigation remained closed throughout the entire month.

In Kentucky several of the rivers, especially the Kentucky River, reached good stages due to the heavy rains during the month, but at no time were they threatening in any way.

#### ENGINEERING NOTES.

The work in the development of the water power of the Ocoee and Tennessee Rivers in Tennessee is progressing rapidly. The completion of this work with the electricity generating plants will mean much to that whole section of country and especially to the cities of Chattanooga and Cleveland, Tenn.

The first dam to be completed is on the Ocoee and is located at Parksville, Polk County, Tenn. Work was started on this dam in August, 1910, and it is expected that it will be completed with the power plant by January 1, 1912. The dam is of the gravity type of cyclopic concrete with spillway 110 feet above low-water mark. The nonoverflow portion of the dam, below which the power house is located, will be 130 feet above bedrock. The building of the dam will cause the water to rise and form a lake about 8 miles long and cover an area of more than 2,000 acres. A second lake will be formed by building a dam across a narrow gorge on Baker Creek, at the head of the first lake and about 9 miles to the east. This second lake will also cover about 2,000 acres. The water from it will be carried by means of a tunnel through Frog Mountain to a power house which will be built about 6 miles below. There a fall of about 600 feet will be utilized, giving about 60,000 horsepower. The two plants working together will develop about 85,000 horsepower for manufacturing and other purposes.

Thirty 9-foot special wicket-gate water turbines mounted on a horizontal shaft and hydroelectric machinery of the very best and latest pattern are to be installed.

The generation and distribution of power has been laid out on a unit basis. The power will be conveyed to manufacturing centers by the three-phase high-tension lines carrying 66,000 volts. This will be stepped down to 2,300 or 4,000 volts at various points as desired. There will be built immediately 130 miles of transmission lines, and later this will be increased to about 300 miles as the field develops.

Transforming stations will be located at Cleveland, Chattanooga, Knoxville, and at a number of other places, with auxiliary stations at Cleveland and Chattanooga. The general offices of the company, the Eastern Tennessee Power Co., are to be located at Cleveland, Tenn., where also will be the central switching station.

TABLE 1.—Climatological data for September, 1911. District No. 3, Ohio Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmetted.							
<b>New York.</b>																					
Allegany.....	Cattaraugus.....	1,441	5	61.3	.....	86	2	32	14	36	5.16	.....	1.40	0	13	12	10	8	7	nw.	Charles E. Whitney.
Bolivar.....	Allegany.....	1,800	17	.....	.....	84	2	43	13†	30	7.77	.....	3.00	0	7	9	9	8	w.	B. O. Newton.	
Olean.....	Cattaraugus.....	.....	3	.....	.....	.....	.....	.....	.....	4.36	.....	0.98	0	15	15	8	7	w.	John W. Alles.		
<b>Pennsylvania.</b>																					
Aleppo.....	Greene.....	1,135	10	67.6	+ 2.5	88	8	37	14	38	6.02	+ 3.60	1.65	0	8	13	11	6	w.	J. S. Hinerman.	
Baldwin.....	Butler.....	1,404	5	64.6	.....	84	2	43	13†	30	7.36	+ 4.36	2.94	0	12	12	12	12	ne.	S. H. Templeton.	
Beaver Dam.....	Beaver.....	674	17	63.2	.....	88	8†	30	13	57	7.36	+ 4.09	2.15	0	12	12	12	12	ne.	U. S. Engineer.	
Brookville.....	Jefferson.....	1,173	20	63.2	.....	92	8†	38	14	40	4.84	.....	1.54	0	11	11	13	6	w.	H. C. Bartholomew.	
Clarion.....	Clarion.....	1,078	26	69.3	.....	92	8	38	14	40	4.84	+ 3.86	2.96	0	7	11	4	15	s.	J. A. Miller.	
Claysville.....	Washington.....	1,127	7	69.3	.....	92	8	38	14	40	4.84	.....	1.54	0	11	11	13	6	w.	E. T. Buchanan.	
Confluence.....	Somerset.....	1,352	27	.....	.....	92	8	38	14	40	4.84	+ 4.05	1.55	0	14	4	4	22	w.	Grant Pyle.	
Franklin.....	Venango.....	955	37	64.0	0.0	86	3	34	14	36	6.66	+ 2.97	2.21	0	11	16	2	12	w.	F. E. Dixon.	
Freepo.....	Armstrong.....	772	38	.....	.....	86	3	34	14	36	6.66	+ 2.97	2.21	0	11	16	2	12	w.	Mrs. Anna R. Burtner.	
Greensboro.....	Green.....	768	22	.....	.....	86	3	34	14	36	6.66	+ 2.97	2.21	0	11	16	2	12	w.	James G. Cramer.	
Greenville.....	Mercer.....	950	15	64.0	+ 2.0	88	2	33	14	39	7.41	+ 4.14	4.09	0	8	21	2	7	nw.	A. M. Orr.	
Indiana.....	Indiana.....	1,350	14	67.6	+ 3.4	88	2†	37	14	37	8.41	+ 4.85	2.25	0	12	15	9	6	nw.	R. W. Wehrle.	
Johnstown.....	Cambria.....	1,184	23	68.0	+ 2.6	89	7†	40	14	36	6.35	+ 2.79	2.62	0	16	12	11	7	sw.	E. C. Lorentz.	
Lock No. 4.....	Washington.....	718	25	.....	.....	88	3	32	14	36	6.31	+ 3.64	1.54	0	13	13	13	13	s.	R. T. McGowan.	
Lycippus.....	Westmoreland.....	1,420	19	67.8	+ 1.0	85	2	42	14	30	9.73	+ 7.09	3.15	0	12	10	5	15	s.	Murray Forbes.	
Pittsburgh.....	Allegheny.....	842	41	68.0	+ 1.9	86	8	45	14	26	6.36	+ 3.88	2.38	0	13	10	13	7	nw.	U. S. Weather Bureau.	
Saegerstown.....	Crawford.....	1,116	20	63.2	+ 1.2	86	2	32	14	42	7.08	+ 3.32	2.54	0	12	5	12	13	nw.	J. G. Apple.	
Skidmore.....	Lawrence.....	1,000	7	65.8	.....	88	2	34	14	35	5.80	.....	2.25	0	6	26	1	3	s.	W. H. Stover.	
Somerset.....	Somerset.....	2,250	55	65.0	+ 4.4	90	3	32	14	46	10.18	+ 7.07	3.25	0	10	3	24	3	ne.	W. M. Schrock.	
Uniontown.....	Fayette.....	999	23	68.3	+ 2.3	86	8	32	14	33	7.00	+ 3.91	1.29	0	13	5	15	10	w.	Wm. Hunt.	
Warren.....	Warren.....	1,137	22	60.8	+ 1.4	88	3	32	14	40	6.27	+ 2.49	2.00	0	11	14	0	16	s-nw.	Anna Simpson.	
<b>Maryland.</b>																					
Deer Park.....	Garrett.....	2,457	17	64.8	+ 4.5	95	2	30	14	49	5.65	+ 3.36	1.82	0	12	9	10	14	6	.....	S. P. Specht.
Grantsville.....	do.....	2,351	17	62.7	+ 1.0	82	8	34	14	31	6.38	+ 3.97	2.00	0	12	10	13	13	4	w.	J. S. Miller.
Oakland.....	do.....	2,461	11	63.5	.....	82	2†	32	14	36	5.58	.....	1.87	0	12	13	13	13	4	w.	R. E. Weber.
<b>West Virginia.</b>																					
Bancroft.....	Putnam.....	574	10	73.5	.....	93	8	46	14	39	3.84	+ 1.75	1.16	0	8	16	0	14	ne.	James Hill.	
Beckley.....	Raleigh.....	2,440	12	68.2	+ 4.9	88	12	40	14	44	2.54	+ 0.53	1.28	0	5	8	17	5	w.	John A. Ewart.	
Bens Run.....	Pleasants.....	622	10	70.7	+ 2.4	91	8	45	14	32	3.10	+ 0.80	0.63	0	11	23	5	2	.....	J. D. Riggs.	
Bluefield.....	Mercer.....	2,563	17	70.1	+ 3.9	86	3†	47	14	29	3.76	+ 1.00	0.71	0	10	15	6	9	.....	Norfolk & Western Ry.	
Buckhannon.....	Upshur.....	1,472	20	67.2	+ 2.4	88	8	38	14	38	6.16	+ 3.26	2.02	0	9	18	5	7	s.	H. A. Darnall.	
Cairo.....	Ritchie.....	637	10	71.6	+ 3.9	95	10†	50	13	33	4.32	+ 1.86	1.25	0	8	2	20	8	.....	Van A. Zevely.	
Central Station.....	Doddridge.....	960	11	67.8	+ 1.4	92 <sup>a</sup>	8	37	14	38 <sup>a</sup>	4.55	+ 1.65	0	11	11	5	5	.....	G. W. Sherwood.		
Charleston.....	Kanawha.....	598	24	73.6	.....	90	8†	47	14	32	3.15	+ 0.30	1.00	0	9	15	12	3	w.	R. C. Hewes.	
Creston.....	Wirt.....	612	11	70.0	+ 3.0	90	8	43	14	33	5.48	+ 3.28	2.13	0	11	14	5	11	w.	J. M. Reed.	
Cuba.....	Jackson.....	544	10	70.4	+ 3.1	91	8	43	14	34	6.22	+ 4.20	1.60	0	11	9	19	2	w.	C. T. Perry.	
Elkhorn.....	McDowell.....	1,933	19	69.5	+ 3.2	87	4†	47	14	31	4.75	+ 2.06	1.75	0	8	14	15	1	sw.	J. J. Lincoln.	
Elkins.....	Randolph.....	1,940	13	66.7	+ 4.9	87	8	39	14	38	6.87	+ 4.00	2.69	0	15	8	14	8	n.	U. S. Weather Bureau.	
Fairmont.....	Marion.....	879	18	71.3	.....	92	3†	46	14	30	4.27	+ 1.87	0.97	0	12	7	10	7	.....	H. G. Glenn Fleming.	
Glenville.....	Gilmer.....	738	22	71.4	+ 4.0	93	8	41	14	39	5.50	+ 2.24	1.62	0	10	13	4	13	.....	John Holt.	
Grafton.....	Taylor.....	585	18	70.2	+ 3.6	92	8	41	14	37	5.44	+ 2.73	1.90	0	13	15	14	1	w.	John W. Snider.	
Green Sulphur Springs.....	Summers.....	1,600	16	72.8	+ 3.6	87	8	41	14	34	2.03	0.14	0.52	0	10	11	11	8	w.	Arthur George.	
Hinton.....	Summers.....	1,400	21	72.8	+ 4.8	93	8	50	14	37	1.80	- 1.23	0.42	0	12	15	5	10	sw.	J. B. Lavender.	
Huntington.....	Cabell.....	510	17	71.2	+ 2.4	86	7†	48	14	30	2.64	+ 0.39	0.82	0	8	11	5	14	w.	L. H. Hutchinson.	
Lewisburg.....	Greenbrier.....	2,200	11	67.8	+ 3.0	86	8	41	14	31	2.05	- 0.70	0.69	0	7	21	6	3	nw.	George T. Argabrite.	
Logan.....	Logan.....	645	10	66.7	.....	92	8	38	14	34	8.30	+ 4.94	1.71	0	9	16	7	7	w.	H. C. Ragland.	
Lost Creek.....	Harrisonson.....	1,033	15	67.7	+ 2.0	92	8	38	14	39	6.15	+ 3.37	1.81	0	12	16	6	8	w.	Allen Smith.	
Madison.....	Boone.....	704	8	.....	.....	90	8	40	14	35	5.99	+ 2.83	2.00	0	17	16	7	7	w.	S. E. Bradley.	
Mannington.....	Marion.....	967	10	67.6	.....	90	8	40	14	35	5.99	+ 2.83	2.00	0	17	16	7	7	w.	Jas. A. Morgan.	
Marlinton.....	Pocahontas.....	2,169	17	(39.1 <sup>b</sup> )	+ 6.9	73	7	35	14	37 <sup>b</sup>	3.61	+ 0.66	1.02	0	10	12 <sup>a</sup>	9 <sup>a</sup>	8 <sup>a</sup>	s.	C. J. McCarty.	
Morgantown.....	Monongalia.....	1,250	36	69.5 <sup>a</sup>	+ 1.5	89	8	42	14	35	5.73	+ 2.63	1.52	0	10	18	2	10	sw.	Horace Atwood.	
Moundsville.....	Marshall.....	640	10	70.5	+ 2.8	90	7	42	14	39	6.31	+ 3.74	1.28	0	10	18	2	10	w.	M. L. Brown.	
New Cumberland.....	Hancock.....	987	14	.....	.....	91	7	44	14	33	5.67	+ 3.20	1.40	0	13	20	6	4	se.	Frank S. Evans.	
Wetzel.....	Wetzel.....	634	18	70.8	+ 2.0	91	7	44	14	33	5.67	+ 3.20	1.40	0	13	20	6	4	se.	Wm. Ankrum.	
Parkersburg.....	Fayette.....	2,252	18	(10.0 <sup>b</sup> )	.....	73	2†	43	15†	37 <sup>b</sup>	4.47	+ 2.14	1.49	0	5	17 <sup>b</sup>	8 <sup>b</sup>	3 <sup>b</sup>	.....	Miss Donna Tully.	
Wood.....	Wood.....	638	24	70.4	+ 4.2	90	8	48	14	29	3.89	+ 1.17	1.73	0	14	6	11	13	sw.	U. S. Weather Bureau.	
Parsons.....	Tucker.....	1,662	12	66.8	+ 3.																

TABLE 1.—Climatological data for September, 1911. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of partly cloudy days.	Number of cloudy days.		
<i>Ohio—Continued.</i>																			
Cincinnati.....	Hamilton.....	628	40	72.0	+ 3.0	90	2	52	30	29	7.52	+ 5.21	2.87	0	12	6	17	7	se.
Circleville.....	Pickaway.....	694	23	70.8	+ 2.8	92	8	47	14 <sup>†</sup>	33	4.25	+ 1.97	0.85	0	12	12	7	11	sw.
Clarington.....	Monroe.....	600	8	68.8	-	90	7 <sup>†</sup>	42	14	36	6.42	-	2.50	0	13	6	14	10	sw.
Columbus.....	Franklin.....	913	33	68.8	+ 2.9	88	8	47	30	26	5.98	+ 3.46	2.09	0	13	10	10	10	e.
Coshocton.....	Coshocton.....	770	2	-	-	-	-	-	-	5.86	-	1.95	0	7	-	-	-	-	-
Dayton (1).....	Montgomery.....	899	-	69.8	-	SS	2	48	30	27	4.19	-	1.38	0	11	8	12	10	sw.
Dayton (2).....	.....do.....	790	30	70.0	+ 2.6	91	2 <sup>†</sup>	44	30	34	4.20	+ 1.63	1.12	0	10	14	6	10	sw.
Delaware.....	Delaware.....	927	14	68.2	+ 2.1	89	1	45	14	36	4.16	+ 1.48	1.02	0	8	11	6	10	sw.
Demos.....	Tuscarawas.....	1,325	23	68.2	+ 2.4	87 <sup>a</sup>	8	41 <sup>a</sup>	13	32	6.30	+ 3.44	1.58	0	11	18 <sup>a</sup>	9	2	s.
Dennison.....	Ross.....	846	1	69.4	-	89	7 <sup>†</sup>	41	14	36	6.77	-	3.73	0	8	11	6	3	n.
Frankfort.....	Portage.....	750	19	70.7	+ 3.7	91	7	44	14	33	4.07	+ 1.78	0.95	0	8	15	6	6	sw.
Garrettsville.....	Granville.....	1,005	27	63.6	+ 2.1	86	2	33	14	38	6.18	+ 2.73	2.11	0	11	10	10	10	nw.
Licking.....	Gratiot.....	960	29	68.4	+ 3.0	88	2	45	14	36	5.11	+ 2.22	1.25	0	10	13	1	16	sw.
.....do.....	Green.....	1,000	-	67.1	+ 1.6	85	2	44	14	28	5.03	+ 2.27	1.32	0	12	12	2	2	n.
Adams.....	Green Hill.....	500	18	72.4	+ 3.7	91	8	47	30	33	4.35	+ 1.85	1.55	0	7	5	8	17	w.
Columbiana.....	Columbiana.....	1,135	17	63.6	+ 0.3	84	2	36	14	34	4.62	+ 1.97	2.49	0	7	10	18	2	sw.
Greenville.....	Darke.....	1,060	25	67.3	+ 2.6	87	2	45	30	29	5.45	+ 2.83	1.10	0	11	7	9	14	s.
Haydenville.....	Hocking.....	700	-	68.1	-	88	7 <sup>†</sup>	40	30	33	4.65	-	0.96	0	12	18	5	7	sw.
Hillsboro.....	Highland.....	1,063	32	70.2	+ 1.8	91	7	44	30	33	5.82	+ 3.16	1.86	0	9	17	5	5	sw.
Ironton.....	Lawrence.....	575	28	72.8	+ 5.1	95	8	46	14 <sup>†</sup>	33	6.33	+ 0.94	1.06	0	11	14	11	5	sw.
Jacksonburg.....	Butler.....	975	43	70.2	+ 1.7	91	2	44	30	32	4.73	+ 2.13	1.30	0	8	18	6	6	sw.
Kenton.....	Hardin.....	1,015	19	66.3 <sup>b</sup>	- 0.5	87 <sup>b</sup>	1 <sup>†</sup>	40 <sup>b</sup>	14	38	3.90	+ 1.65	2.02	0	7	11 <sup>b</sup>	9 <sup>b</sup>	8 <sup>b</sup>	n.
Killbuck.....	Holmes.....	1,087	19	67.2	+ 2.4	87	7 <sup>†</sup>	40	14	35	4.47	+ 3.73	3.40	0	9	17	9	4	ne.
Lancaster.....	Fairfield.....	898	16	68.3	+ 2.3	86	2 <sup>†</sup>	47	14	30	5.06	+ 2.93	1.07	0	12	14	8	8	sw.
McConnellsburg.....	Morgan.....	710	27	69.8	+ 2.4	87	2 <sup>†</sup>	43	14	32	4.43	+ 1.29	1.16	0	11	10	12	8	s.
Marietta.....	Washington.....	627	91	69.9	+ 4.4	88	7 <sup>†</sup>	44	14	31	3.70	+ 0.56	1.25	0	12	14	6	6	n.
Marion.....	Milfordton.....	980	33	68.3	+ 2.1	90	1	44	14	36	3.59	+ 0.55	1.32	0	7	9	13	8	nw.
Milligan.....	Knox.....	1,200	19	67.4	+ 2.4	88	6	40	14	34	3.32	+ 0.65	1.65	0	8	18	8	4	sw.
Perry.....	Perry.....	875	18	68.4 <sup>c</sup>	+ 2.2	89	2 <sup>†</sup>	42 <sup>c</sup>	30	37	5.96	+ 3.75	1.41	0	9	11	16	3	n.
Millport.....	Columbiana.....	1,145	18	65.2	+ 1.4	86	2	37	14	33	4.85	+ 2.44	2.24	0	9	8	17	5	sw.
Nellie.....	Coshocton.....	850	11	66.0	+ 0.8	87	2	40	14	35	5.32	+ 2.92	1.75	0	10	9	15	6	n.
New Alexandria.....	Jefferson.....	1,050	26	68.2	+ 2.8	89	5 <sup>†</sup>	39	12	40	6.15	+ 3.48	2.00	0	8	17	4	9	w.
New Berlin.....	Stark.....	1,100	18	64.9	- 0.4	85	1 <sup>†</sup>	37	14	35	4.53	+ 2.22	3.12	0	7	19	7	4	n.
New Waterford.....	Columbiana.....	1,053	16	65.6	+ 1.8	87	2	36	14	33	6.69	+ 4.27	2.60	0	6	13	14	3	sw.
Ohio State University.....	Franklin.....	757	28	68.2	+ 2.9	88	2	40	30	31	5.15	+ 2.57	1.19	0	11	9	14	7	s.
Pataskala.....	Licking.....	1,015	19	67.6	+ 1.4	87	2	45	14	29	7.18	+ 4.39	2.10	0	13	6	21	3	sw.
Peerless.....	Adams.....	645	16	67.9	+ 2.4	87	7 <sup>†</sup>	40	14	44	5.98	-	2.65	0	7	15	13	2	e.
Philo.....	Piqua.....	1,018	16	68.8	+ 1.4	88	2	45	14	30	5.41	+ 2.96	1.18	0	12	12	12	6	sw.
Plattsburg.....	Muskingum.....	527	1	68.0	+ 0.9	86	1 <sup>†</sup>	42	30	36	4.86	+ 2.40	1.19	0	10	10	2	18	ne.
Portsmouth.....	Clark.....	1,130	18	68.0	+ 0.9	86	1 <sup>†</sup>	42	30	36	4.86	+ 2.40	1.19	0	9	11	8	11	sw.
Prospect.....	Scioto.....	527	80	71.2	+ 3.4	89	7 <sup>†</sup>	41	30	30	4.24	+ 1.55	1.90	0	9	8	0	22	sw.
Rittman.....	Marion.....	909	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Neil J. Gast.	
Wayne.....	Wayne.....	990	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	J. B. Gish.	
Shenandoah.....	Richland.....	1,100	18	65.2	+ 0.8	86	2	41	14	34	3.36	+ 0.51	1.42	0	10	6	19	5	n.
Sidney.....	Shelby.....	985	28	69.0 <sup>d</sup>	+ 3.0	90 <sup>d</sup>	2	47	30	35	4.35	+ 1.33	1.66	0	10	10	9	11	sw.
Somerset.....	Perry.....	1,080	12	69.5	+ 2.0	89	2 <sup>†</sup>	46	14 <sup>†</sup>	30	4.40	+ 2.26	1.00	0	11	14	11	5	n.
Springfield.....	Clark.....	980	17	-	-	-	-	-	-	-	6.79	+ 4.02	1.24	0	11	6	22	2	s.
Summerfield.....	Noble.....	1,187	5	67.5 <sup>c</sup>	-	90 <sup>c</sup>	8	40 <sup>c</sup>	14	37	4.64	-	1.29	0	12	8	20	2	sw.
Syracuse.....	Meigs.....	583	1	72.1	-	94	8	45	13	34	5.34	-	1.44	0	10	10	15	5	e.
Thurman.....	Gallia.....	696	18	71.0	+ 1.1	90	7	43	13	31	3.71	+ 2.01	1.50	0	6	6	22	2	s.
Urbania.....	Champaign.....	1,031	42	67.9	+ 2.6	89	2	45	30	34	6.72	+ 3.53	2.27	0	10	11	16	3	sw.
Warren.....	Pike.....	900	22	65.8	+ 1.6	88	2	37	14	36	7.29	+ 4.35	2.85	0	10	17	3	10	sw.
Waverly.....	Warren.....	590	28	70.0	+ 1.6	90	8	43	14	31	6.86	+ 4.38	2.58	0	13	9	0	21	ne.
Waynesville.....	Warren.....	700	26	69.0 <sup>d</sup>	+ 2.2	86 <sup>d</sup>	1 <sup>†</sup>	47 <sup>d</sup>	14 <sup>†</sup>	29	5.67	+ 3.18	1.05	0	9	9	9 <sup>b</sup>	4 <sup>b</sup>	w.
Wooster.....	Wayne.....	1,030	32	65.1	+ 1.4	87	2	37	14	33	6.53	+ 3.14	4.12	0	8	14	10	6	nw.
Youngstown.....	Mahoning.....	846	18	-	-	-	-	-	-	-	5.96	+ 3.08	3.20	0	9	17	1	12	w.
Zanesville.....	Muskingum.....	700	24	-	-	-	-	-	-	-	5.83	+ 3.38	1.80	0	11	12	3	15	s.
<i>Indiana.</i>																			
Anderson.....	Madison.....	892	16	69.1	+ 2.3	90	1 <sup>†</sup>	43	30	33	4.14	+ 1.10	1.20	0	12	10	15	5	ne.
Attica.....	Fountain.....	522	1	-	-	-	-	-	-	-	6.04	-	1.01	0	15	-	-	-	W. H. Stanton.
Bloomington.....	Monroe.....	744	16	71.0	+ 2.7	89	1 <sup>†</sup>	47	30	33	9.03	+ 6.94	3.26	0	16	8	7	15	sw.
Bluffton.....	Wells.....	835	16	69.2	+ 3.5	90	1 <sup>†</sup>	44	30	36	3.99	+ 0.66	1.90	0	13	13	14	3	sw.
Butterville.....	Jennings.....	767	26	71.6	+ 3.2	92	4	47	30	32	8.69	+ 5.95	3.62	0	12	9	9	9	w.
Cambridge City.....	Wayne.....	941	29	68.6	+ 3.6	91	1 <sup>†</sup>	41	30	41	3.56	+ 0.20	0.90	0	13	12	1	17	ne.
Columbus.....	Bartholomew.....	632	28	70.4	+ 3.2	91	1 <sup>†</sup>	44	30	36	10.63	+ 7.61	5.45	0	14	9	6	15	sw.
Connersville.....	Fayette.....	769	29	70.5	+ 4.9	91	1 <sup>†</sup>	46	30	38	4.67	+ 1.85	1.20	0	7	4	21		

TABLE 1.—Climatological data for September, 1911. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.			
				Mean.	Departure from the normal.	Highest.	Date,	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, 0.01 inch or more.	Number of partly cloudy days.	Number of clear days.		
<i>Indiana—Continued.</i>																			
Seymour.....	Jackson.....	610	24	72.6	+ 4.5	94	1†	49	30	38	8.25	+ 5.35	2.06	0	12	3	25	2	n.w.
Shelbyville.....	Shelby.....	768	7	70.6	-	91	2	47	30	36	7.27	-	1.60	0	14	9	17	2	s.w.
Shoals.....	Martin.....	523	4	-	-	-	-	-	-	-	9.27	-	1.93	0	14	-	-	-	-
Terre Haute.....	Fountain.....	498	21	71.4	+ 2.0	93	2	47	30	37	11.20	+ 8.42	2.58	0	14	6	8	8	s.w.
Veedersburg.....	Switzerland.....	612	12	70.4	+ 2.0	93	2	42	30	37	4.38	+ 1.82	0.90	0	17	13	19	7	e.
Vevay.....	Knox.....	525	30	73.1	+ 2.5	95	2†	52	30	37	8.83	+ 5.90	3.20	0	11	3	15	12	sw.
Vincennes.....	Daviess.....	431	19	73.2	+ 2.5	96	2†	52	30	36	14.80	+ 11.74	2.30	0	15	11	23	7	s.
Washington.....	Boone.....	484	15	73.0	+ 3.5	92	18	51	22	32	10.51	+ 7.25	2.55	0	12	14	7	9	sw.
Whitestown.....	Kosciusko.....	529	3	67.8	-	89	1	44	30	36	4.86	-	0.83	0	16	6	23	1	s.w.
Winona Lake.....	Greene.....	865	4	67.4	-	93	2	42	30	36	4.60	-	1.00	0	14	5	14	11	e.
Worthington.....	-	526	29	72.2	+ 5.0	93	2	50	30	34	7.95	+ 4.99	1.67	0	12	8	18	4	sw.
<i>Illinois.</i>																			
Albion.....	Edwards.....	531	20	74.1	+ 4.2	96	15	53	22	32	4.08	+ 1.05	1.55	0	15	11	14	5	s.
Carmi.....	White.....	399	-	-	-	-	-	-	-	-	3.79	-	0.70	0	12	17	0	13	Daniel Berry.
Charleston.....	Colas.....	720	26	70.4	+ 1.7	92	1†	47	20†	33	10.25	+ 7.14	2.49	0	14	7	9	14	Jacob B. Daisy.
Danville.....	Vermilion.....	604	10	70.4	-	93	2	45	30	37	5.91	+ 2.57	1.64	0	14	13	5	12	J. J. Lemon.
Equality.....	Gallatin.....	421	13	76.8	+ 4.7	95	12†	52	22	37	5.07	+ 1.98	1.57	0	14	9	19	2	se.
Fairfield.....	Wayne.....	495	18	74.4	+ 4.1	95	14†	50	22	37	6.80	+ 3.43	2.27	0	15	17	0	13	Dr. L. W. Gordon.
Flora.....	Clay.....	495	25	73.1	+ 4.9	96*	2†	49*	22	38*	9.82	+ 6.65	2.88	0	14	13	10	7	George A. Tromly.
Golconda.....	Pope.....	500	33	76.6	+ 4.9	95	12†	52*	22	34*	4.75	+ 1.59	1.25	0	11	12	14	4	Joseph S. Peak.
Hooperston.....	Vermilion.....	715	9	67.6	+ 1.6	90	2	43	30	31	7.28	+ 3.52	1.76	0	18	16	5	9	Dr. D. Lawrence.
McLeansboro.....	Hamilton.....	462	28	76.4	+ 6.6	96	12	53	23	37	6.19	+ 3.10	1.00	0	11	17	8	5	S. F. Hoskinson.
Metropolis.....	Massac.....	346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. Mary E. Robinson.	
Montrose.....	Effingham.....	590	11	71.3	+ 2.3	95	1†	48	20†	41	13.64	+ 10.17	2.72	0	14	12	16	2	B. F. Michels.
Mount Carmel.....	Wabash.....	424	10	73.4	-	93	2†	55	20†	33	5.44	+ 2.11	1.08	0	16	-	-	-	J. C. Spitzer.
New Burnside.....	Johnson.....	556	16	74.8	+ 2.6	94	12†	47	22	35	5.45	+ 2.47	1.62	0	13	10	10	10	Thomas H. M. Phillips.
Olney.....	Richland.....	486	24	73.8	+ 4.0	95	2	52	22	34	12.23	+ 8.87	3.23	0	8	11	11	11	Victor E. Phillips.
Palestine.....	Crawford.....	500	29	73.0	+ 5.3	95	2	50	30	35	11.52	+ 8.18	2.62	0	13	9	8	13	T. S. Woodward.
Paris.....	Edgar.....	600	18	69.4	+ 0.6	92	2	45	30	35	11.43	+ 8.05	3.35	0	11	7	19	4	sw.
Rantoul.....	Champaign.....	700	27	69.2	+ 3.2	91	1†	45	30	34	8.92	+ 5.74	2.02	0	14	22	0	8	H. P. Twyman.
Robinson.....	Crawford.....	500	11	73.0	+ 3.4	94	2	51	20†	31	12.52	+ 8.48	2.40	0	13	15	5	10	H. A. Burr.
Summer.....	Lawrence.....	459	5	72.8	-	90	2	51	23	30	14.60	-	3.71	0	14	13	8	9	William Breiner.
Tuscola.....	Douglas.....	644	18	69.2*	+ 1.9	94	2†	45*	20	35*	9.27	+ 5.73	2.40	0	12	13	5	12	A. P. Woodworth.
Urbana.....	Champaign.....	725	9	67.8	+ 1.6	90	2	43	30	28	8.90	+ 5.70	2.72	0	15	4	16	10	O. A. Fyffe.
<i>Kentucky.</i>																			
Alpha.....	Clinton.....	17	74.9	+ 4.2	91	8	56	1	30	1.85	- 1.42	0.60	0	5	18	8	4	s.	
Anchorage.....	Jefferson.....	700	10	71.8	+ 2.9	92	3	49	22	33	2.98	+ 0.19	0.74	0	11	13	10	7	sw.
Bardstown.....	Nelson.....	637	14	75.6	+ 3.8	97	4	51	22	34	3.13	+ 0.44	0.90	0	8	13	1	16	C. E. Barrett.
Beattyville.....	Lee.....	650	7	73.2	-	95	7†	50	30	39	4.76	-	1.86	0	9	6	11	13	G. M. Talbott.
Beaver Dam.....	Ohio.....	441	8	75.8	-	95	14†	50	22	33	4.99	-	3.32	0	5	12	6	12	G. W. Cann.
Berea.....	Madison.....	1,070	10	74.6	+ 5.4	93	8	55	20†	31	3.08	+ 1.36	0.90	0	7	20	6	4	T. S. Woodward.
Bowling Green.....	Warren.....	500	22	76.6	+ 4.6	97	18	53	22	36	0.40	- 2.66	0.12	0	5	15	3	12	C. F. Rumold.
Burnside.....	Pulaski.....	773	20	-	-	-	-	-	-	-	3.68	+ 0.42	1.14	0	8	17	4	9	Mrs. L. G. Causey.
Calhoun.....	McLean.....	397	8	77.0	-	96	18	54	22†	36	2.27	-	0.67	0	8	7	21	2	sw.
Catlettsburg.....	Boyd.....	544	22	-	-	-	-	-	-	-	3.08	+ 0.61	1.00	0	9	19	3	8	W. A. Taylor.
Earlington.....	Hopkins.....	370	21	76.9	+ 6.4	99	18	49	22	41	3.69	+ 0.64	1.07	0	9	19	1	10	Mrs. Mertie M. Bruns.
Edmonton.....	Metcalfe.....	600	20	76.4	+ 6.7	95	4	54	22	38	2.19	- 1.16	0.90	0	10	14	11	3 <sup>b</sup>	Miss Lee Ray.
Eubank.....	Pulaski.....	1,177	17	72.8	+ 4.3	90	8	54	1†	33	3.02	- 0.40	0.75	0	6	7	11	12	Mrs. Katie Payne.
Falmouth.....	Pendleton.....	530	22	-	-	-	-	-	-	-	3.44	+ 1.47	1.10	0	10	12	9	9	J. V. Oldham.
Farmers.....	Rowan.....	668	5	72.1	-	94	7†	46	12	35	3.36	-	1.00	0	9	12	2	16	Miss Gertrude Sorrell.
Frankfort.....	Franklin.....	560	20	73.0	+ 4.4	88	7†	54	22	35	0.35	+ 0.21	0.63	0	12	9	10	11	J. H. Roberts.
Franklin.....	Simpson.....	691	17	77.0	+ 5.6	96	28	52	22	35	1.52	- 2.14	1.32	0	4	1	29	0	sw.
Greensburg.....	Green.....	581	19	73.6	+ 3.6	95	4	51	13†	41	4.60	+ 1.63	1.15	0	13	10	20	20	J. E. Newman.
High Bridge.....	Jessamine.....	762	8	-	-	-	-	-	-	-	5.18	+ 2.07	1.86	0	9	19	4	7	Miss Lulu Wood.
Hopkinsville.....	Christian.....	524	15	77.2	+ 5.5	97	14	54	22	37	3.45	+ 0.41	1.15	0	6	12	3	15	W. F. Randle.
Irvington.....	Breckinridge.....	635	13	73.6	+ 2.7	90	14†	53	22	28	5.79	+ 2.96	2.10	0	10	14	6	10	W. J. Piggott.
Leitchfield.....	Grayson.....	635	15	73.8	+ 4.2	90	14	54	22	26	5.51	+ 1.88	1.50	0	10	11	15	4	sw.
Lexington.....	Fayette.....	989	23	72.5	+ 4.6	90	7	52	30	32	4.37	+ 1.95	1.22	0	12	5	11	14	U. S. Weather Bureau.
Loretto.....	Marion.....	681	14	74.6	+ 4.0	92	3	49	22	35	4.17	+ 1.49	1.30	0	9	20	7	3	Loretto Academy.
Louisville.....	Jefferson.....	525	40	74.9	+ 5.0	92	14	56	30	32	4.66	+ 2.03	1.26	0	13	9	12	9	sw.
Marion.....	Crittenden.....	16	75.9	+ 4.0	94	18	54	22	30	3.67	+ 0.63	1.39	0	8	10	14	6	sw.	
Maysville.....	Mason.....	524	14	72.2	+ 2.0	95	7†	48	14	38	5.31	+ 2.62	1.36	0	13	15	5	12	Mrs. Mary D. Marsh.
Middlesboro.....	Bell.....	1,128	15	75.2	+ 6.9	94	8	53	30	31	3.51	+ 0.86	1.25	0	14	14	16	0	sw.
Mount Sterling.....	Montgomery.....	930	21	72.2	+ 4.6	90	2†	52	14†	33	4.57	+ 1.68	1.09	0	12	13	9	10	James O'Connell.
Owensboro.....	Daviss.....	479	14	74.8	+ 4.2	93	14†	53	24	33	1.52	- 1.29	0.54	0	9	11	1	11	Henry S. Berry.
Paducah.....	McCracken.....	341	22	-	-	-	-	-	-	-	3.38	+ 0.39	1.36	0	12	19	0	11	S. A. Fowler.
Paintsville.....	Pike.....	3	-	-	-	-	-	-	-	-	2.02	-	1.00	0	8	11	1	18	R. L. Atkinson.
Richmond.....	Madison.....	926	19	74.7	+ 4.1	93	8	54	30	32	4.41	+ 1.77	1.72	0	9	15	5	10	I. M. Williams.
St. John.....	Hardin.....	777	15	73.6	+ 4.7	92	18†	50	22	32	3.45	+ 0.36	0.87	0	10	19	1	10	J. W. Crooke.
Scott.....	Kenton.....	13	71.7	1.7	91	7	53	14	29	7.46	+ 4.98	1.92	0	14	9	15	6	s.	
Shelby City.....	Boyle.....	1,087	17	73.4	+ 3.6	98	7	50	24	30	4.84	+ 2.09	1.28	0	11	21	5	4	H. F. Ewing.
Taylorsville.....	Shelby.....	759	22	73.8	+ 4.3	96	3	51	14†	38	4.90	+ 2.10	1.10	0	11	9	11	10	C. R. Burnett.
Williamsburg.....	Spencer.....	480	9	73.0	+ 4.3	90	7†	51	22	31	3.61	+ 0.21	1.07	0	12	8	15	7	sw.
Williamsburg.....	Whitley.....	930	15	76.2	+ 5.9	95	2†	52	30	35	3.24	+ 0.10	1.40	0	7	20	1	9	E. D. Bourne.
Williamstown.....	Grant.....	943	9	70.8															

TABLE 1.—Climatological data for September, 1911. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevaling wind direction.	Observer			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<b>Tennessee—Continued.</b>																					
Elizabethhton.	Carter.	1,575	21								2.26	- 0.41	0.80	0	9	21	6	3	e.	Charles Boyd.	
Erasmus.	Cumberland.	1,850	14	71.6	+ 5.3	91	27	49	23	38	1.22	- 2.23	0.36	0	9	11	19	0	sw.	Mrs. Sara E. Ashley.	
Florence.	Rutherford.	560	29	76.6	+ 5.3	92	23	56	23	30	2.19	- 1.29	0.34	0	6	17	11	2	s.	Erastus P. Bell.	
Franklin.	Williamson.	648	21	76.2	+ 4.9	92	16	56	23	29	1.50	- 2.05	0.65	0	5	17	5	8	.....	Young M. Rizer.	
Halls Hill.	Rutherford.	9									1.74		1.00	0	4	20	0	10	s.	Ed F. Wright.	
Harriman.	Roane.	841	16	77.4	+ 7.1	95	9	60	1	30	3.65	+ 0.66	1.23	0	8	7	23	0	.....	Robert R. Ayres.	
Hohenwald.	Lewis.	983	25	76.2	+ 6.4	93	14	53	23	32	4.03	+ 0.91	1.54	0	9	14	15	1	w.	John Lutzelman.	
Iron City.	Lawrence.	600	14	80.4	+ 8.5	95	14†	62	1†	27	3.94	+ 0.11	1.25	0	8	4	26	0	nw.	Capt. H. Paul Seavy.	
Jefferson City.	Jefferson.	1									1.24		0.42	0	8	8	12	10	w.	Calvin C. Maddox.	
Johnson City.	Washington.	1,620		75.7	+ 7.8	97	3	59	1†	34	1.51	- 1.06	0.53	0	8	8	12	10	w.	Ward Crosby.	
Johnsonville.	Humphreys.	364	15	77.6	+ 5.4	95	12†	54	22†	35	5.00	+ 1.78	2.20	0	8	19	8	3	s.	Miss Sallie B. Matthews.	
Kingston.	Roane.	20									1.98	- 1.65	1.05	0	7	16	0	14	.....	Henry Crumbliss.	
Knoxville.	Knox.	977	40	77.1	+ 7.7	92	8	63	27	27	1.59	- 0.92	0.93	0	8	8	15	7	ne.	U. S. Weather Bureau.	
Lebanon.	Wilson.	522	2	77.2	+ 7.0	94	27	56	22†	34	2.70		1.15	0	10	14	9	7	n.	H. Logan Fields.	
Lewisburg.	Marshall.	727	16	78.5	+ 7.0	97	27†	55	23	37	3.01		1.48	0	8	17	12	1	s.	Dr. Robert D. Crutcher.	
Livingston.	Overtown.	1,065	8	76.6		96	28	54	1	36	1.15		0.55	0	3	13	17	0	.....	L. H. Carlock.	
Loudon.	Loudon.	316	8	76.1	+ 5.1	91	27†	57	1†	29	2.60	- 1.36	1.06	0	7	12	7	11	w.	Robert W. Clark.	
Lynville.	Giles.	770	23	76.1							2.69	- 0.96	0.62	0	7	7	13	0	.....	Col. James H. Burrow.	
McGhee.	Monroe.	7									2.04		0.85	0	6	26	0	4	s.	Miss Alice L. Headrick.	
McMinnville.	Warren.	1,011	27	77.0	+ 7.2	94	7†	58	1†	32	3.58	+ 0.65	1.75	0	7	7	22	1	s.	J. Tilden Sparkman.	
Maryville.	Blount.	1,050	15	76.4	+ 4.7	92	8	62	8†	30	1.85	- 1.31	0.75	0	9	10	15	5	sw.	Mrs. Sam T. Broyles.	
Mountain City.	Johnson.	2,486	14	68.6	+ 5.2	84†	1†	52	2†	32	2.48	- 0.61	0.82	0	9	11	9	3	s.	Edward E. Barry.	
Nashville.	Davidson.	654	40	77.6	+ 6.1	93	14	59	23	28	1.89	- 1.79	0.96	0	11	9	18	2	w.	U. S. Weather Bureau.	
Newport.	Cooke.	1,280	21	75.8	+ 6.2	88	3†	62	14	23	2.22	- 0.15	0.70	0	11	9	20	3	s.	Dr. Charles T. Burnet.	
New River.	Scott.	1,215	4								2.18		0.76	0	4	20	3	7	w.	Burl W. Buttram.	
Palmetto.	Bedford.	770	18	77.2	+ 4.9	96	27	51	23	40	2.57	- 1.09	1.10	0	6	21	8	1	s.	Miss Carrie Cash.	
Pinewood.	Hickman.	4	74.7								4.22			0	3	14	15	1	s.	Miss Bessie Howard.	
Pope.	Perry.	400	14	78.2	+ 5.8	93	19	55	1	36	3.70	+ 1.01	1.70	0	3	14	14	2	w.	Fred Beal.	
Rogersville.	Hawkins.	1,150	26	70.3	+ 1.5	93	2†	56	27†	35	2.09	- 0.64	0.56	0	10	14	14	3	nw.	Samuel G. Wilson.	
Rugby.	Morgan.	1,410	23	74.3	+ 7.0	93	7†	51	30	38	2.68	- 0.91	0.63	0	11	7	9	14	w.	William Fort Bell.	
Savannah.	Hardin.	442	27								1.43		0	12	8	8	4	4	.....	Herbert O. Eckel.	
Sevierville.	Sevier.	5	75.6								3.92	+ 0.52	0.86	0	6	5	7	15	sw.	Arthur H. Noll.	
Sewanee.	Franklin.	2,000	15	74.9	+ 5.4	90	28	58	2	22	1.10	- 1.06	0.92	0	4	2	11	17	s.	Ernest H. Hull.	
Sparta.	White.	920	5	75.6		91	8†	57	21†	30	2.24		0.88	0	6	13	10	7	w.	Mrs. Lucy E. Breeding.	
Springdale.	Clairborne.	1,058	21	75.2	+ 5.4	96	4	52	30	34	2.42	- 0.98	0.75	0	6	12	16	2	sw.	Hutchinal A. Boden.	
Springville.	Henry.	377	8	76.1							4.74		1.43	0	12	8	8	4	s.	J. Caloway Carr.	
Tazewell.	Clairborne.	14									3.92	+ 0.52	0.86	0	6	5	7	15	sw.	Reuben T. Moore.	
Tullahoma.	Coffee.	1,075	23	76.1	+ 6.2	92	27†	56	1†	32	2.06	- 1.08	1.13	0	6	11	18	1	s.	John K. Roberts.	
Walling.	White.	909	8								1.69		0.55	0	6	19	3	8	.....	Harry C. Boyd.	
Waynesboro.	Wayne.	753	25	77.6	+ 7.5	94	27	53	23	37	2.29	- 1.08	0.78	0	6	8	20	2	sw.	William R. Wilson.	
Wildersville.	Henderson.	400	14	77.4	+ 5.7	94	27	53	30	35	3.90	+ 1.09	1.10	0	9	20	7	3	s.	James G. Elizer.	
Worsham.	Sumner.	550	10								2.29		0.72	0	7	12	7	11	w.	William P. Watson.	
Yukon.	Lincoln.	850	14	76.4	+ 3.8	92	27	57	3	29	3.33	- 0.06	2.50	0	3	21	9	0	w.	.....	
<b>Alabama.</b>																					
Bridgeport.	Jackson.	660	11								3.34	+ .48	1.75	0	5				w.	R. L. Moore.	
Decatur.	Morgan.	573	29	78.6	+ 5.8	95	28	58	1†	31	2.84	- .10	1.55	0	5	20	4	6	s.	Ernest A. Carriger.	
Florence.	Lauderdale.	503	27	78.8	+ 5.6	92	14	60	22	27	1.76	- 1.58	.96	0	2	24	0	6	w.	Robt. E. Coburn.	
Guntersville.	Marshall.	580	1	79.4†		98	28	61	1	35	1.12		.72	0	2				e.	L. S. Long.	
Madison.	Madison.	573	17	78.7	+ 4.5	98	9	58	1	31	1.53	- 2.02	.95	0	3	26	4	0	nw.	Albert Kish.	
Riverton.	Colbert.	360	14	77.4	+ 4.3	97	27	52	23	40	1.92	- 1.48	.76	0	6	17	5	5	e.	Ernie J. Moore.	
Scottsboro.	Jackson.	652	28	77.5	+ 5.6	95	28	61	22†	32	1.32	- 2.25	.65	0	6	14	6	10	nw.	H. A. Caldwell.	
Tuscumbia.	Colbert.	488	29	78.4	+ 5.4	94	14	59	23	39	1.01	- 2.08	.60	0	5	11	8	11	se.	Samuel Moore.	
<b>Georgia.</b>																					
Diamond.	Gilmer.	2,020	21	74.2*	+ 5.6	90*	10	50*	8†	30	2.89	- 1.85	1.36	0	8	12	15	3	.....	R. A. Kimzey.	
Mineral Bluff.	Fannin.	2,020	21	74.2		91	2†	58	8†	33	3.32		1.36	0	11	10	20	0	n.	J. M. C.	
<b>North Carolina.</b>																					
Altapass.	Mitchell.	2,629	1	74.9		93	1†	56	7†	35	3.97		1.73	0	14	13	16	1	sw.	W. J. Woodward.	
Andrews.	Cherokee.	1,800	1	74.9							3.97		1.73	0	14	13	16	1	nw.	J. D. Link.	
Asheville.	Buncombe.	2,255	32	71.0	+ 6.0	86	7	55	15	30	2.26	- .78	.71	0	15	6	18	6	w.	U. S. Weather Bureau.	
Banners Elk.	Avery.	3,750	3	65.2		80	1†	48	2	31	2.40		.50	0	12	8	12	10	w.	T. L. Lowe.	
Blowing Rock.	Watauga.	4,090	3	65.8		82	8	47	5	31	2.51		.50	0	12	9	17	7	s.	Herman S. Deal.	
Brevard.	Transylvania.	2,230	10	72.2	+ 5.3	87	7†	56	17	27	7.65	+ 2.95	5.50	0	7	14	14	2	s.	W. E. Breese.	
Bryson City.	Swain.	2,000	23								3.70	+ .44	.95	0	9				.....	D. K. Collins.	
Cullowhee.	Jackson.	2,100	1	72.6		89	27	55	7	32	5.57		1.03	0	9	17	7	6	nw.	F. H. Brown.	
Eagle Nest.	Haywood.	5,050	64.2								7.62	2	1.20	2.93	0	11	17	8	5	sw.	S. C. Satterwhite.
Hendersonville.	Henderson.	2,167	15	70.7	+ 4.7	88	7†	52	14	32	2.63	- 1.37	.57	0	10	16	9	5	nw.	Dr. L. B. Morse.	
Highlands.	Macon.	3,670	21	67.2	+ 6.9	79	7†	52	15	25	5.90	+ .25	2.00	0	10	12	13	5	nw.	T. G. Harbison.	
Hot Springs																					

TABLE 2.—*Daily precipitation for September, 1911. District No. 8, Ohio Valley.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
<i>New York.</i>																																	
Allegany.....	Allegany.....	.07		1.40	.18	.51	.30																										5.16
Bolivar.....	do.....	.04		.98	.09	.74	.26																									4.36	
Olean    .....	do.....																																
<i>Pennsylvania.</i>																																	
Aleppo.....	Ohio.....	.83	.62		.20																											6.02	
Baldwin.....	Allegheny.....	1.00	.57		1.40																											7.77	
Beaver Dam.....	Ohio.....	.52		.17	.02	.07																										6.86	
Brookville.....	Allegheny.....	.94	.77		.16	1.00																										7.36	
Clarion.....	do.....	2.01		.03	.77																											7.44	
Claysville.....	Ohio.....	.19	1.54	T.	.03	.34																										6.91	
Confluence.....	Youghiogheny.....	.04		.65	.04	T.	.00	.50	.25	.06																				4.84			
Davis Island Dam.....	Ohio.....	T.	1.18	T.	134.88	.05	.08																								10.15		
Derry Station.....	Allegheny.....		.87	.50																												6.69	
Franklin.....	do.....	.72	.01	.23	1.13																											6.66	
Freeport.....		1.72			1.79	.03																										8.71	
Greensboro.....	Monongahela.....	.78	.04		.64	.30	.26																								6.36		
Greensburg.....	Youghiogheny.....	.19	.95		.02	.45																										7.91	
Greenville.....	Ohio.....	.82	.11		.98																											7.41	
Grove City.....	do.....	.64	.19		.31	.43																										6.43	
Herrs Island Dam.....	Allegheny.....	T.	1.02	T.	03.189	.05	.03																									6.81	
Indiana.....	do.....	.26	.84		.11	.13																										8.41	
Irwin.....	Monongahela.....	511.04			.46																											6.49	
Johnstown.....	Allegheny.....	.05	.04		.08	1.01																									6.35		
Lock No. 4.....	Monongahela.....	.15	.45	T.	.38																											6.31	
Lycippus.....	Allegheny.....	.08	.65		.76																											9.73	
Parkers Landing.....	do.....		.24		2.00	T.																										6.43	
Pittsburgh.....	Ohio.....	.82	T.	.01	.30	1.77	T.	.05																							6.36		
Saegeertown.....	Allegheny.....	.08	.58	.67																												7.08	
Saltsburg.....	do.....	1.20	.01	T.	1.20	T.																										7.46	
Skidmore.....	Ohio.....		1.00		.80	.40																										5.80	
Somerset.....	Youghiogheny.....	1.10		.90	.60																											10.18	
Springdale.....	Allegheny.....	1.24		17.25	.04																											9.52	
Uniontown.....	Monongahela.....	.55		.40	.07																											7.00	
Warren.....	Allegheny.....	.10	.60		.44																											6.27	
West Newton.....	Youghiogheny.....	.01		1.86		.09	.60	.16	.47																						7.61		
<i>Maryland.</i>																																	
Deer Park.....	Youghiogheny.....		.39			.63																										5.65	
Grantsville.....	do.....	.55		.20	.82																											6.38	
Oakland.....	do.....	.07		.08	.18																											5.58	
<i>West Virginia.</i>																																	
Bancroft    .....	Great Kanawha.....		.22																														3.84
Beckley.....	do.....	1.28																															2.54
Bens Run.....	Ohio.....	.35	.47	.63	.48																											3.10	
Bluefield.....	Great Kanawha.....	.56		.41																													3.76
Brandonville    .....	Monongahela.....		*	1.63																												5.57	
Buckhannon.....	do.....				T.																											6.16	
Cairo.....	Little Kanawha.....	.83	.20																													4.32	
Central Station.....	Middle Island Creek.....	.18	.19		1.08	*	*	*	*	*																						4.55	
Charleston    .....	Great Kanawha.....		.05		.25																											3.15	
Creston    .....	Little Kanawha.....		.73	.02																												5.48	
Cuba.....	Sand Creek.....	17	.50		.68																											6.22	
Davis    .....	Monongahela.....																																
Elizabeth    .....	Little Kanawha.....	.01		.40	.23	.01	.15	.38	.65																						4.41		
Ekhorn.....	Big Sandy.....	.50		.30																												4.75	
Elkins.....	Monongahela.....	T.	.22		.05	.28																									6.87		
Fairmont    .....	do.....	T.	.61	.07	.01	.71	.14																								4.37		
Glenville    .....	Little Kanawha.....		.30			.10	.40																								5.50		
Grafton.....	Monongahela.....	.05	.65		.41	.05	.26	.08	T.																					5.44			
Green Sulphur Springs.....	Great Kanawha.....	.15	.16		.12	T.	.25	T.	T.																						2.03		
Hinton    .....	do.....	.04		.04	.20																											1.80	
Huntington    .....	Ohio.....		.18		.18	.10	.40																								2.64		
Lewisburg.....	Great Kanawha.....	.22																														2.05	
Logan.....	Guyandotte.....					</																											

TABLE 2.—*Daily precipitation for September, 1911. District No. 8—Continued.*

Stations.	Watershed.	Day of month.																												Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
<i>Ohio.</i>																																	
Amesville.....	Ohio.....																																5.88
Bangorville.....	Muskingum.....																															4.32	
Bellefontaine	Great Miami.....																															4.66	
Bladensburg.....	Muskingum.....																														3.70		
Cadiz.....	Ohio.....																															5.95	
Cambridge.....	Muskingum.....																														6.78		
Camp Denison.....	Ohio.....																														6.75		
Canal Dover.....	Muskingum.....																														6.92		
Canton    .....	do.....																														4.50		
Cardington.....	Scioto.....																														4.28		
Chillicothe    .....	do.....																														5.67		
Cincinnati.....	Ohio.....																														7.52		
Clareville    .....	Scioto.....																														4.25		
Clarington.....	Ohio.....																														6.42		
Columbus.....	Scioto.....																														5.98		
Coshocton    .....	Muskingum.....																														5.86		
Dayton (1).....	Great Miami.....																														5.20		
Dayton (2).....	do.....																														4.19		
Delaware.....	Scioto.....																														4.20		
Demos.....	Ohio.....																														4.16		
Dennison.....	Muskingum.....																														6.30		
Frankfort.....	Scioto.....																														6.77		
Garrettsville.....	Mahoning.....																														4.07		
Granville    .....	Muskingum.....																														6.18		
Gratiot.....	do.....																														5.11		
Green.....	Ohio.....																														5.03		
Green Hill.....	Muskingum.....																														4.35		
Greenville    .....	Great Miami.....																														4.62		
Haydensville.....	Ohio.....																														5.45		
Hillsboro.....	Scioto.....																														5.82		
Ironton.....	T.....																														3.63		
Jacksonburg.....	Great Miami.....																														4.73		
Kenton.....	Scioto.....																														3.90		
Killbuck.....	Muskingum.....																														6.47		
Lancaster.....	Ohio.....																														5.06		
McConnelsville.....	Muskingum.....																														4.13		
Marietta.....	Ohio.....																														3.70		
Marion.....	Scioto.....																														3.59		
Millfordton.....	Muskingum.....																														3.32		
Milligan.....	do.....																														5.96		
Millport.....	Ohio.....																														4.85		
Nellie.....	Muskingum.....																														5.32		
New Alexandria.....	Ohio.....																														5.41		
New Berlin.....	Muskingum.....																														6.36		
New Waterford.....	Ohio.....																														6.69		
Ohio State Univer. y	Scioto.....																																
Pataskala.....	Muskingum.....																																
Peebles    .....	Ohio.....																																
Philo (1).....	Muskingum.....																																
Piqua    .....	Great Miami.....																																
Plattsburg.....	do.....																														4.24		
Portsmouth    .....	Scioto.....																																
Prospect    .....	Muskingum.....																																
Rittman.....	do.....																																
Shenandoah.....	Muskingum.....																														3.36		
Sidney.....	Great Miami.....																														4.35		
Somerset    .....	Muskingum.....																														4.40		
Springfield.....	Great Miami.....																														6.79		
Summerfield.....	Ohio.....																														4.64		
Syracuse.....	do.....																														5.34		
Thurman.....	do.....																														3.71		
Urbana.....	Great Miami.....																														6.72		
Warren.....	Mahoning.....																														7.29		
Waverly    .....	Scioto.....																														6.86		
Waynesville.....	Great Miami.....																														5.67		
Wooster.....	Muskingum.....																														6.63		
Youngstown    .....	Mahoning.....																														5.96		
Zanesville    .....	Muskingum.....																														5.83		
<i>Indiana.</i>																																	
Anderson.....	W. Fork, White																														4.14		
Attica    .....	Wabash.....																														6.04		
Bloomington    .....	W. Fork, White																																
Bluffton    .....	Wabash.....																														9.63		
Butlerville.....	E. Fork, White																														3.99		
Cambridge City    .....	Whitewater.....																														8.69		
Columbus    .....	E. Fork, White																														3.67		
Connerville.....	Whitewater.....																																

TABLE 2.—*Daily precipitation for September, 1911. District No. 3—Continued.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
<i>Indiana—Contd.</i>																																	
Princeton †	Wabash	1.46	.97	.80	...	.18	.20	.37	.10	.09	.38	.37	.42	.08	.01	.25	.52	.56	.36	.13	.19	.03	.28	.08	.45	.48	.83	...	...	...	...		
Richmond	Whitewater	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.98	
Rochester	Wabash	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.01	
Rockville	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.38	
Rome	Ohio	T.	.59	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.84	
Salamonie	Wabash	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.81	
Salem	Ohio	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.61	
Scottsburg	E. Fork, White	1.01	.30	.23	.19	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.80	
Seymour	do	2.06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.25	
Shelbyville	do	1.34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.27	
Shoals	do	1.18	.35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.27	
Terre Haute	Wabash	1.50	.07	.60	.40	1.30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.20		
Veedersburg	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.38	
Vevey	Ohio	1.50	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.85	
Vincennes	Wabash	2.30	1.00	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.80	
Washington	W. Fork, White	2.93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.51	
Whitestown	do	82	.32	.01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.86	
Winona Lake	Wabash	1.15	.02	.02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.60	
Worthington	W. Fork, White	1.30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.95	
<i>Illinois.</i>																																	
Albion	Wabash	.21	1.55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.08	
Carmi	do	.63	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.79	
Charleston	do	1.75	.85	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.25	
Danville	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.91	
Equality	Ohio	.02	10.10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.07		
Fairfield	Wabash	.08	2.27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.80	
Flora	do	2.88	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.82	
Golconda	Ohio	1.19	1.25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.75	
Hoopeston	Wabash	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.28	
McLeansboro	Ohio	44	1.00	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.19	
Metropolis	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monroe	Wabash	1.55	1.00	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.64	
Mount Carmel	do	30	.72	.26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.44	
New Burnside	Ohio	1.62	1.10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.45	
Olney	Wabash	3.23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.23	
Palestine	do	1.56	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.52	
Paris	do	1.57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.43	
Philo	do	1.78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.92	
Rantoul	do	1.37	1.42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.91	
Robinson	do	1.63	T.	1.12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.52	
Summer	do	3.71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.60	
Tuscola	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.27	
Urbana	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.90	
<i>Kentucky.</i>																																	
Alpha	Cumberland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.85	
Anchorage	Ohio	1.19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.98	
Bardstown	Salt	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.13	
Beattyville	Kentucky	1.86	1.64	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.76	
Beaver Dam	Green	3.32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.99	
Berea	Kentucky	T.	1.73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.08	
Bowling Green	Green	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.40	
Burnside	Cumberland	2.25	1.00	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.68	
Calhoun	Green	1.87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.27	
Catlettsburg	Big Sandy	T.	1.20	...	...	...	...	...</																									

TABLE 2.—*Daily precipitation for September, 1911. District No. 8—Continued.*

\* Precipitation included in that of the next measurement.

Separate dates of falls not recorded.  
Precipitation for the 24 hours ending

Precipitation for the 24 hours ending on the morning when it is measured.  
Precipitation is less than 0.01 inch rain or melted snow.

1. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for September, 1911. District No. 3.*

Date.	Pennsylvania.				West Virginia.										Ohio.													
	Greenville.		Pittsburgh.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.		Morgantown.		Parkersburg.		Wheeling.		Canton.		Cincinnati.		Columbus.		Dayton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1....	86	54	83	61	83	63	82	58	81	58	85	50	81	61	81	60	84	60	86	59	86	54	90	61	86	60	88	61
2....	88	58	86	66	88	63	85	55	86	54	90	59	85	62	87	59	89	61	90	62	88	64	88	64	88	65	88	65
3....	82	56	76	60	87	64	83	57	81	57	84	60	82	61	86	65	78	62	87	62	76	57	82	67	77	60	80	62
4....	80	41	80	54	87	64	87	56	84	53	87	52	84	61	85	50	80	56	84	51	79	51	85	62	81	58	83	56
5....	72	53	77	65	85	67	85	59	82	60	84	64	82	65	83	64	79	66	83	55	72	57	75	68	74	66	77	67
6....	81	63	79	67	85	68	80	61	81	61	85	67	83	68	82	65	82	66	83	59	81	61	84	68	79	63	78	65
7....	82	59	85	65	89	67	84	62	85	61	89	64	86	67	87	60	89	63	86	65	86	61	88	65	86	60	85	62
8....	83	60	86	66	90	67	87	60	87	58	93	66	86	68	89	66	90	68	88	64	81	61	87	70	88	66	88	65
9....	85	59	81	64	90	69	85	61	72	63	82	67	82	71	79	66	82	68	83	65	85	61	85	70	81	67	84	67
10....	85	55	83	63	86	69	83	59	83	61	85	65	83	68	83	64	85	65	86	65	85	61	86	69	84	67	84	66
11....	86	60	82	66	84	68	77	63	81	61	83	66	76	70	81	63	82	66	84	65	85	61	85	68	83	68	84	65
12....	76	56	72	53	82	67	79	66	77	51	82	65	81	66	75	64	77	69	79	72	62	80	63	73	57	77	60	60
13....	64	40	61	48	80	56	77	54	63	43	70	51	68	58	67	57	65	62	67	49	66	43	72	58	65	53	68	56
14....	71	33	71	45	79	47	75	47	77	39	80	41	74	48	76	42	74	48	77	44	71	39	76	55	65	49	69	51
15....	75	57	74	62	84	64	82	58	74	60	80	62	82	52	73	62	78	67	74	46	76	51	75	64	75	68	75	68
16....	83	51	80	62	77	66	79	62	75	60	80	65	76	67	81	66	81	66	83	65	81	64	82	67	83	64	83	64
17....	84	46	78	55	83	66	79	57	80	54	85	64	78	66	83	63	83	61	83	56	85	64	82	61	82	61	83	62
18....	82	52	78	59	82	60	79	58	81	49	85	57	81	63	79	58	84	61	81	54	82	55	86	67	79	62	81	67
19....	71	51	78	59	82	66	79	60	79	61	80	63	78	65	78	62	82	63	83	58	77	61	79	64	75	59	76	59
20....	71	42	72	50	79	57	78	57	74	52	77	54	72	56	70	52	72	56	73	46	75	56	73	54	73	53	73	53
21....	74	41	80	55	85	58	78	57	78	49	85	52	81	58	83	54	84	55	83	51	77	48	76	59	75	54	75	57
22....	74	53	73	59	83	64	78	56	75	55	79	60	75	55	78	57	82	57	77	55	74	52	74	57	73	55	73	58
23....	81	46	82	57	82	59	78	60	82	49	87	57	81	59	84	59	83	58	83	54	81	51	84	60	83	57	82	55
24....	87	56	84	66	85	63	81	60	84	54	88	58	81	59	87	62	85	65	88	55	87	59	84	62	84	64	81	60
25....	75	56	81	68	85	66	80	60	80	59	85	65	82	64	83	65	84	65	85	61	81	66	77	60	80	63	78	64
26....	69	46	69	57	83	67	79	59	69	54	75	65	75	66	75	67	72	58	75	63	72	58	73	64	72	60	73	62
27....	75	42	73	55	85	60	81	53	77	55	83	57	83	59	87	62	83	54	79	51	71	50	87	63	81	57	84	62
28....	65	42	68	56	82	67	81	60	71	63	83	64	77	77	82	66	77	75	86	70	50	74	68	69	60	71	62	62
29....	73	53	76	58	83	67	87	64	77	57	77	67	82	68	80	60	81	58	70	57	77	54	80	58	78	54	77	53
30....	57	44	58	51	82	53	75	50	65	47	76	47	76	47	77	52	72	50	66	52	62	50	68	52	64	47	67	48
Mns.	77.2	50.8	76.9	59.1	83.9	63.4	80.5	58.5	78.0	55.4	82.8	59.9	79.8	62.6	80.10	58.9	79.9	60.9	80.9	57.2	78.0	55.2	80.9	63.2	77.8	59.9	78.8	60.7

Date.	Ohio.								Indiana.								Kentucky.											
	Marion.		Waverly.		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.		Philo, Ill.		Beattyville.		Bowling Green.		Earlington.		Greensburg.		Lexington.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	90	58	85	56	90	58	87	66	88	61	88	54	89	59	90	56	91	55	88	57	90	58	93	56	88	55	86	62
2....	89	64	87	59	89	63	88	68	90	67	88	65	91	64	93	62	91	58	94	56	90	58	93	53	88	58	86	65
3....	82	61	80	62	86	64	90	69	81	66	81	65	84	65	87	65	82	63	91	57	95	59	90	56	87	63	88	63
4....	87	51	83	56	92	61	88	66	85	63	84	54	86	62	89	60	88	60	93	58	93	60	96	61	87	64	84	64
5....	77	62	75	66	84	66	82	70	77	76	76	64	77	75	81	67	81	65	82	64	84	66	80	62	76	76	86	66
6....	78	63	84	65	90	63	88	69	79	66	73	61	80	65	87	66	82	61	88	62	91	66	92	64	88	65	88	68
7....	87	61	89	59	90	66	84	69	84	66	87	61	82	65	87	66	87	65	95	65	91	64	94	67	88	65	88	67
8....	85	62	90	64	90	67	89	70	83	68	82	63	82	67	87	67	89	65	95	63	91	64	93	61	89	67	88	67
9....	80	64	84	68	87	63	84	70	79	67	76	63	78	65	80	68	79	63	89	65	91	64	88	68	85	70	80	68
10....	83	61	86	64	88	65	87	72	82	63	79	59	78	65	83	67	75	64	86	6								

TABLE 3.—Maximum and minimum temperatures for September, 1911. District No. 3—Continued.

Date.	Kentucky.						Tennessee.										Decatur, Ala. §§		Asheville, N. C.		Virginia.													
	Louisville.		Mays- ville. § §		Williams- burg. § §		Chatta- nooga.		Johnson City. § §		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynes- boro.				Big Stone Gap.		Wythe- ville.									
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.								
1....	90	63	91	56	90	61	88	64	92	63	87	65	85	61	87	57	86	59	85	62	87	58	83	62	83	54	80	54						
2....	90	65	94	57	95	60	90	72	95	61	91	65	89	64	91	62	90	63	88	64	90	59	84	59	85	58	84	54	80	63				
3....	90	69	88	60	88	67	87	68	97	67	89	71	90	69	88	63	85	66	90	67	89	67	81	63	83	63	80	63	82	57				
4....	89	66	93	60	90	65	85	67	82	63	89	67	87	63	83	63	87	67	90	67	80	62	86	63	82	63	82	63	82	57				
5....	77	71	77	60	87	67	87	68	82	62	85	67	84	67	84	67	87	69	87	71	77	63	80	63	77	62	80	63	77	62				
6....	89	67	89	63	90	66	88	68	86	65	85	67	90	70	91	66	85	67	89	67	89	68	80	61	82	65	80	62	82	65	80	62		
7....	92	70	95	62	94	64	90	66	94	62	89	66	89	65	90	63	92	66	88	69	86	57	85	61	86	57	83	62	85	58	83	62		
8....	91	68	95	63	95	63	93	62	92	66	92	64	92	68	91	69	93	66	91	62	91	67	91	70	84	60	83	62	85	58	83	62		
9....	84	69	89	64	91	66	89	68	92	65	90	70	84	70	92	68	88	64	91	67	91	70	83	62	81	65	81	61	81	61	81	61		
10....	90	70	91	66	89	67	90	69	93	68	89	67	90	70	92	68	88	65	91	68	91	70	84	63	84	63	85	62	84	63	85	62		
11....	84	71	88	69	86	63	83	71	87	69	85	70	84	70	86	71	84	68	89	69	89	70	79	65	81	68	78	65	81	68	78	65		
12....	88	68	84	65	89	66	89	69	87	66	88	68	92	68	94	66	88	69	92	67	90	69	81	66	80	63	80	63	80	63	80	63		
13....	70	62	75	56	82	64	88	69	82	63	81	65	86	67	90	66	86	66	90	64	91	70	79	59	76	64	72	51	71	64	72	51		
14....	92	60	78	48	94	61	90	66	88	59	89	65	93	69	93	68	91	64	93	69	92	69	74	56	81	55	71	50	81	55	71	50		
15....	90	74	89	51	92	67	91	69	88	63	87	68	92	76	92	71	91	69	91	70	92	70	85	55	82	63	78	52	82	63	78	52		
16....	80	71	82	67	89	68	90	70	88	66	86	68	89	70	93	71	88	66	91	67	91	69	84	59	82	64	78	64	82	64	78	64		
17....	86	71	86	61	88	68	85	67	80	68	85	67	85	68	85	68	85	65	92	67	93	70	76	63	81	67	79	58	81	67	79	58		
18....	91	70	82	63	87	66	86	69	85	68	86	69	92	70	89	68	87	67	90	68	93	70	73	61	80	65	76	53	81	65	76	53		
19....	80	64	82	63	83	67	84	67	83	63	84	68	83	70	88	67	83	68	89	67	87	71	80	61	80	64	81	57	81	60	81	57		
20....	78	57	80	51	84	60	88	68	89	65	86	68	83	65	89	69	85	65	87	64	87	68	82	63	79	62	80	60	80	60	80	60		
21....	77	62	80	52	87	60	87	68	88	64	89	67	83	65	85	61	83	57	88	65	89	68	83	62	82	59	76	61	81	61	81	61	81	61
22....	74	56	79	53	85	64	85	66	90	64	84	67	87	60	85	55	83	64	89	61	82	58	83	63	78	64	78	61	81	61	81	61	81	
23....	86	57	92	56	90	59	82	64	89	62	87	65	87	59	91	51	86	57	90	53	88	63	70	64	80	59	75	59	81	60	81	60	81	
24....	86	62	89	57	88	61	85	67	89	61	85	65	89	65	90	61	86	66	87	59	88	63	77	63	81	60	81	59	81	60	81	60	81	
25....	79	64	87	58	92	60	88	67	85	60	86	69	90	66	93	60	87	63	89	62	89	67	78	62	79	63	81	60	81	60	81	60	81	
26....	76	67	77	59	87	64	89	66	83	61	87	64	88	68	93	60	87	63	92	62	93	66	80	61	78	63	77	60	80	61	77	60	80	
27....	90	63	91	57	92	61	90	67	91	59	90	63	92	67	96	62	91	61	94	63	93	66	85	60	83	60	82	59	83	60	82	59	83	
28....	81	69	82	58	91	63	92	69	93	65	90	70	92	69	95	62	90	65	92	66	95	66	84	61	84	62	81	62	82	61	82	61	82	
29....	82	64	86	66	87	65	91	73	81	66	90	71	90	72	95	64	90	65	93	68	92	67	82	60	80	64	78	62	82	60	80	64	78	62
30....	76	56	75	50	85	52	86	69	81	59	83	64	84	65	86	64	84	61	88	66	89	69	82	64	76	66	77	55	82	66	77	55	82	
Mean.	84.3	65.5	85.5	59.0	88.9	63.5	87.9	67.8	87.7	63.7	87.1	67.1	87.8	67.4	90.1	64.4	86.8	64.3	89.9	65.4	89.9	67.3	80.6	61.3	81.2	62.5	79.3	58.7						

\*, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

§ Data are from standard instruments not supplied by the U. S. Weather Bureau.

§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.